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Unicode Character Database
Derived Bidirectional Properties

This file defines the Bidi_Mirrored property for character codes that may be changed in future versions of the Unicode Bidirectional Algorithm (Unicode Standard Annex #9). This property is intended for use in implementations of the Bidirectional Algorithm. For more information, see Bidi Mirroring in the Unicode Bidirectional Algorithm (UAX #9).

For each character that has the Bidi_Mirrored property, a mapping to a character that is a reasonable glyph substitution for a glyph for the character in a context where the character is preceded by a character with the Bidi_Mirrored property. Typically, such a character is used in a context where the character is a member of a pair, and the glyph for the other member of the pair is a glyph that looks like a mirror image of the glyph for the character. For more information, see Mirroring in the Bidirectional Algorithm in the Unicode Standard.

There is a one-to-one mapping of such characters, and a character with the Bidi_Mirrored property should not map to a character that is a member of a different pair. In exceptional circumstances, additional characters may receive the Bidi_Mirrored property, if they are mirrored glyphs in all known legacy fonts, and if a character that is a member of a pair with such a character in a font is encoded in Unicode. In such cases, the character may be added to the Bidi_Mirroring_Glyph property, even if it is the only character for which that property applies, or even if the character to which it maps is not a member of any other pair.

```
# BidiMirroring.txt
# Date: 2013-03-19, 17:11:00 GMT [MD]
#
# Bidi_Mirrored property
# Generated from: UnicodeData.txt
#
# This file defines the Bidi_Mirrored property for
# characters that may be changed in future versions
# of the Unicode Bidirectional Algorithm (Unicode
# Standard Annex #9). This property is intended for
# use in implementations of the Bidirectional
# Algorithm. For more information, see Bidi Mirroring
# in the Unicode Bidirectional Algorithm (UAX #9).
#
# For each character that has the Bidi_Mirrored
# property, a mapping to a character that is a
# reasonable glyph substitution for a glyph for the
# character in a context where the character is
# preceded by a character with the Bidi_Mirrored
# property. Typically, such a character is used in
# a context where the character is a member of a
# pair, and the glyph for the other member of the
# pair is a glyph that looks like a mirror image of
# the glyph for the character. For more information,
# see Mirroring in the Bidirectional Algorithm in
# the Unicode Standard.
#
# There is a one-to-one mapping of such characters,
# and a character with the Bidi_Mirrored property
# should not map to a character that is a member of
# a different pair. In exceptional circumstances,
# additional characters may receive the Bidi_Mirrored
# property, if they are mirrored glyphs in all known
# legacy fonts, and if a character that is a member
# of a pair with such a character in a font is
# encoded in Unicode. In such cases, the character
# may be added to the Bidi_Mirroring_Glyph property,
# even if it is the only character for which that
# property applies, or even if the character to which
# it maps is not a member of any other pair.
#
# For more information, see Mirroring in the
# Bidirectional Algorithm in the Unicode Standard
#
# Codepoints interleaved with corresponding
# Bidi_Mirroring_Glyph mappings.
#
# Bidi_Mirrored=Y
0028 ; 0029 # LEFT PARENTHESIS
0029 ; 0028 # RIGHT PARENTHESIS
003C ; 003E # LESS-THAN SIGN
003E ; 003C # GREATER-THAN SIGN
005B ; 005D # LEFT SQUARE BRACKET
005D ; 005B # RIGHT SQUARE BRACKET
007B ; 007D # LEFT CURLY BRACKET
007D ; 007B # RIGHT CURLY BRACKET
00AB ; 00BB # LEFT-POINTING DOUBLE ANGLE QUOTATION MARK
00BB ; 00AB # RIGHT-POINTING DOUBLE ANGLE QUOTATION MARK
2039 ; 203A # SINGLE LEFT-POINTING ANGLE QUOTATION MARK
203A ; 2039 # SINGLE RIGHT-POINTING ANGLE QUOTATION MARK
2045 ; 2046 # LEFT SQUARE BRACKET WITH QUILL
2046 ; 2045 # RIGHT SQUARE BRACKET WITH QUILL
207D ; 207E # SUPERSCRIPT LEFT PARENTHESIS
207E ; 207D # SUPERSCRIPT RIGHT PARENTHESIS
208D ; 208E # SUBSCRIPT LEFT PARENTHESIS
208E ; 208D # SUBSCRIPT RIGHT PARENTHESIS
2201 ; 2201 # COMPLEMENT
2202 ; 2202 # PARTIAL DIFFERENTIAL
2208 ; 220B # ELEMENT OF
2209 ; 220C # NOT A MEMBER OF
220A ; 220D # SMALL ELEMENT OF
220B ; 2208 # CONTAINS AS MEMBER
220C ; 2209 # DOES NOT CONTAIN AS MEMBER
220D ; 220A # SMALL CONTAINS AS MEMBER
220E ; 220E # END OF PROOF
2211 ; 2211 # N-ARY SUMMATION
2215 ; 29F5 # DIVISION SLASH
2216 ; 2216 # SET MINUS
2217 ; 2217 # ASTERISK OPERATOR
221A ; 221A # SQUARE ROOT
221B ; 221C # CUBE ROOT
221C ; 221B # FOURTH ROOT
2220 ; 2221 # ANGLE
2221 ; 2220 # MEASURED ANGLE
2222 ; 2222 # SPHERICAL ANGLE
2223 ; 2223 # DIVIDES
2224 ; 2224 # DOES NOT DIVIDE
2225 ; 2225 # PARALLEL TO
2226 ; 2226 # NOT PARALLEL TO
2227 ; 2227 # LOGICAL AND
2228 ; 2228 # LOGICAL OR
2229 ; 2229 # INTERSECTION
222A ; 222A # UNION
223C ; 223D # TILDE OPERATOR
223D ; 223C # REVERSED TILDE
2240 ; 2240 # WREATH PRODUCT
2243 ; 2243 # ASYMPTOTICALLY EQUAL TO
2244 ; 2244 # NOT ASYMPTOTICALLY EQUAL TO
2247 ; 2247 # NEITHER APPROXIMATELY NOR ACTUALLY EQUAL TO
2248 ; 2248 # ALMOST EQUAL TO
2249 ; 2249 # NOT ALMOST EQUAL TO
224A ; 224A # ALMOST EQUAL OR EQUAL TO
224B ; 224B # TRIPLE TILDE
2252 ; 2252 # APPROXIMATELY EQUAL TO OR THE IMAGE OF
2253 ; 2253 # THE IMAGE OF OR APPROXIMATELY EQUAL TO
2254 ; 2254 # COLON EQUALS
2255 ; 2255 # EQUALS COLON
2256 ; 2256 # RING IN EQUAL TO
2257 ; 2257 # RING EQUAL TO
2259 ; 2259 # ESTIMATES
225A ; 225A # ANGLE OF DEFLECTION
225B ; 225B # GREATER-THAN WITH QUESTION MARK ABOVE
225C ; 225C # DELTA EQUAL TO
225D ; 225D # EQUAL TO BY DEFINITION
225E ; 225E # MEASURED BY
225F ; 225F # QUESTIONED EQUAL TO
2260 ; 2260 # NOT EQUAL TO
2261 ; 2261 # IDENTICAL TO
2262 ; 2262 # NOT IDENTICAL TO
2264 ; 2265 # LESS-THAN OR EQUAL TO
2265 ; 2264 # GREATER-THAN OR EQUAL TO
2266 ; 2267 # LESS-THAN OVER EQUAL TO
2267 ; 2266 # GREATER-THAN OVER EQUAL TO
2268 ; 2269 # LESS-THAN BUT NOT EQUAL TO
2269 ; 2268 # GREATER-THAN BUT NOT EQUAL TO
226A ; 226B # MUCH LESS-THAN
226B ; 226A # MUCH GREATER-THAN
226D ; 226D # EQUIVALENT TO
226E ; 226F # NOT LESS-THAN
226F ; 226E # NOT GREATER-THAN
2270 ; 2271 # NEITHER LESS-THAN NOR EQUAL TO
2271 ; 2270 # NEITHER GREATER-THAN NOR EQUAL TO
2272 ; 2273 # LESS-THAN OR EQUIVALENT TO
2273 ; 2272 # GREATER-THAN OR EQUIVALENT TO
2274 ; 2275 # NEITHER LESS-THAN NOR EQUIVALENT TO
2275 ; 2274 # NEITHER GREATER-THAN NOR EQUIVALENT TO
2276 ; 2277 # LESS-THAN OR GREATER-THAN
2277 ; 2276 # GREATER-THAN OR LESS-THAN
2278 ; 2279 # NEITHER LESS-THAN NOR GREATER-THAN
2279 ; 2278 # NEITHER GREATER-THAN NOR LESS-THAN
227A ; 227B # PRECEDES
227B ; 227A # SUCCEEDS
227C ; 227D # PRECEDES OR EQUAL TO
227D ; 227C # SUCCEEDS OR EQUAL TO
227E ; 227F # PRECEDES OR EQUIVALENT TO
227F ; 227E # SUCCEEDS OR EQUIVALENT TO
2280 ; 2281 # DOES NOT PRECEDE
2281 ; 2280 # DOES NOT SUCCEED
2282 ; 2283 # SUBSET OF
2283 ; 2282 # SUPERSET OF
2284 ; 2285 # NOT A SUBSET OF
2285 ; 2284 # NOT A SUPERSET OF
2286 ; 2287 # SUBSET OF OR EQUAL TO
2287 ; 2286 # SUPERSET OF OR EQUAL TO
2288 ; 2289 # NEITHER A SUBSET OF NOR EQUAL TO
2289 ; 2288 # NEITHER A SUPERSET OF NOR EQUAL TO
228A ; 228B # SUBSET OF WITH NOT EQUAL TO
228B ; 228A # SUPERSET OF WITH NOT EQUAL TO
228F ; 2290 # SQUARE IMAGE OF
2290 ; 228F # SQUARE ORIGINAL OF
2291 ; 2292 # SQUARE IMAGE OF OR EQUAL TO
2292 ; 2291 # SQUARE ORIGINAL OF OR EQUAL TO
2298 ; 2298 # CIRCLED DIVISION SLASH
22A2 ; 22A3 # RIGHT TACK
22A3 ; 22A2 # LEFT TACK
22A6 ; 2ADE # ASSERTION
22A8 ; 2AE4 # TRUE
22A9 ; 2AE3 # FORCES
22AB ; 2AE5 # DOUBLE STROKE
22B0 ; 22B1 # PRECEDES UNDER RELATION
22B1 ; 22B0 # SUCCEEDS UNDER RELATION
22B2 ; 22B3 # NORMAL SUBGROUP OF
22B3 ; 22B2 # CONTAINS AS NORMAL SUBGROUP
22B4 ; 22B5 # NORMAL SUBGROUP OF OR EQUAL TO
22B5 ; 22B4 # CONTAINS AS NORMAL SUBGROUP OR EQUAL TO
22B6 ; 22B7 # ORIGINAL OF
22B7 ; 22B6 # IMAGE OF
22BE ; 22BF # RIGHT ANGLE WITH ARC
22BF ; 22BE # RIGHT TRIANGLE
22C9 ; 22CA # LEFT NORMAL FACTOR SEMIDIRECT PRODUCT
22CA ; 22C9 # RIGHT NORMAL FACTOR SEMIDIRECT PRODUCT
22CB ; 22CC # LEFT SEMIDIRECT PRODUCT
22CC ; 22CB # RIGHT SEMIDIRECT PRODUCT
22CD ; 223D # REVERSED TILDE EQUAL TO
22D0 ; 22D1 # DOUBLE SUBSET
22D1 ; 22D0 # DOUBLE SUPERSET
22D2 ; 22D3 # DOUBLE INTERSECTION
22D3 ; 22D2 # DOUBLE UNION
22D4 ; 22D4 # PITCHFORK
22D5 ; 22D5 # EQUAL AND PARALLEL TO
22D6 ; 22D7 # LESS-THAN WITH DOT
22D7 ; 22D6 # GREATER-THAN WITH DOT
22D8 ; 22D9 # VERY MUCH LESS-THAN
22D9 ; 22D8 # VERY MUCH GREATER-THAN
22DA ; 22DB # LESS-THAN EQUAL TO OR GREATER-THAN
22DB ; 22DA # GREATER-THAN EQUAL TO OR LESS-THAN
22DC ; 22DD # EQUAL TO OR LESS-THAN
22DD ; 22DC # EQUAL TO OR GREATER-THAN
22DE ; 22DF # EQUAL TO OR PRECEDES
22DF ; 22DE # EQUAL TO OR SUCCEEDS
22E0 ; 22E1 # DOES NOT PRECEDE OR EQUAL
22E1 ; 22E0 # DOES NOT SUCCEED OR EQUAL
22E2 ; 22E3 # NOT SQUARE IMAGE OF OR EQUAL TO
22E3 ; 22E2 # NOT SQUARE ORIGINAL OF OR EQUAL TO
22E4 ; 22E5 # SQUARE IMAGE OF OR NOT EQUAL TO
22E5 ; 22E4 # SQUARE ORIGINAL OF OR NOT EQUAL TO
22E6 ; 22E7 # LESS-THAN BUT NOT EQUIVALENT TO
22E7 ; 22E6 # GREATER-THAN BUT NOT EQUIVALENT TO
22E8 ; 22E9 # PRECEDES BUT NOT EQUIVALENT TO
22E9 ; 22E8 # SUCCEEDS BUT NOT EQUIVALENT TO
22EA ; 22EB # NOT NORMAL SUBGROUP OF
22EB ; 22EA # DOES NOT CONTAIN AS NORMAL SUBGROUP
22EC ; 22ED # NOT NORMAL SUBGROUP OF OR EQUAL TO
22ED ; 22EC # DOES NOT CONTAIN AS NORMAL SUBGROUP OR EQUAL
22F0 ; 22F1 # UP RIGHT DIAGONAL ELLIPSIS
22F1 ; 22F0 # DOWN RIGHT DIAGONAL ELLIPSIS
22F2 ; 22FA # ELEMENT OF WITH LONG HORIZONTAL STROKE
22F3 ; 22FB # ELEMENT OF WITH VERTICAL BAR AT END OF HORIZONTAL STROKE
22F4 ; 22FC # SMALL ELEMENT OF WITH VERTICAL BAR AT END OF HORIZONTAL STROKE
22F6 ; 22FD # ELEMENT OF WITH OVERBAR
22F7 ; 22FE # SMALL ELEMENT OF WITH OVERBAR
22FA ; 22F2 # CONTAINS WITH LONG HORIZONTAL STROKE
22FB ; 22F3 # CONTAINS WITH VERTICAL BAR AT END OF HORIZONTAL STROKE
22FC ; 22F4 # SMALL CONTAINS WITH VERTICAL BAR AT END OF HORIZONTAL STROKE
22FD ; 22F6 # CONTAINS WITH OVERBAR
22FE ; 22F7 # SMALL CONTAINS WITH OVERBAR
2308 ; 2309 # LEFT CEILING
2309 ; 2308 # RIGHT CEILING
230A ; 230B # LEFT FLOOR
230B ; 230A # RIGHT FLOOR
2329 ; 232A # LEFT-POINTING ANGLE BRACKET
232A ; 2329 # RIGHT-POINTING ANGLE BRACKET
2768 ; 2769 # MEDIUM LEFT PARENTHESIS ORNAMENT
2769 ; 2768 # MEDIUM RIGHT PARENTHESIS ORNAMENT
276A ; 276B # MEDIUM FLATTENED LEFT PARENTHESIS ORNAMENT
276B ; 276A # MEDIUM FLATTENED RIGHT PARENTHESIS ORNAMENT
276C ; 276D # MEDIUM LEFT-POINTING ANGLE BRACKET ORNAMENT
276D ; 276C # MEDIUM RIGHT-POINTING ANGLE BRACKET ORNAMENT
276E ; 276F # HEAVY LEFT-POINTING ANGLE QUOTATION MARK ORNAMENT
276F ; 276E # HEAVY RIGHT-POINTING ANGLE QUOTATION MARK ORNAMENT
2770 ; 2771 # HEAVY LEFT-POINTING ANGLE BRACKET ORNAMENT
2771 ; 2770 # HEAVY RIGHT-POINTING ANGLE BRACKET ORNAMENT
2772 ; 2773 # LIGHT LEFT TORTOISE SHELL BRACKET ORNAMENT
2773 ; 2772 # LIGHT RIGHT TORTOISE SHELL BRACKET ORNAMENT
2774 ; 2775 # MEDIUM LEFT CURLY BRACKET ORNAMENT
2775 ; 2774 # MEDIUM RIGHT CURLY BRACKET ORNAMENT
27C3 ; 27C4 # OPEN SUBSET
27C4 ; 27C3 # OPEN SUPERSET
27C5 ; 27C6 # LEFT S-SHAPED BAG DELIMITER
27C6 ; 27C5 # RIGHT S-SHAPED BAG DELIMITER
27D5 ; 27D6 # LEFT OUTER JOIN
27D6 ; 27D5 # RIGHT OUTER JOIN
27DD ; 27DE # LONG RIGHT TACK
27DE ; 27DD # LONG LEFT TACK
27E2 ; 27E3 # WHITE SQUARE WITH ROUNDED TOP-RIGHT CORNER
27E3 ; 27E2 # WHITE SQUARE WITH ROUNDED BOTTOM-RIGHT CORNER
27E4 ; 27E5 # WHITE SQUARE WITH ROUNDED TOP-LEFT CORNER
27E5 ; 27E4 # WHITE SQUARE WITH ROUNDED BOTTOM-LEFT CORNER
27E6 ; 27E7 # MATHEMATICAL LEFT WHITE SQUARE BRACKET
27E7 ; 27E6 # MATHEMATICAL RIGHT WHITE SQUARE BRACKET
27E8 ; 27E9 # MATHEMATICAL LEFT ANGLE BRACKET
27E9 ; 27E8 # MATHEMATICAL RIGHT ANGLE BRACKET
27EA ; 27EB # MATHEMATICAL LEFT DOUBLE ANGLE BRACKET
27EB ; 27EA # MATHEMATICAL RIGHT DOUBLE ANGLE BRACKET
27EC ; 27ED # MATHEMATICAL LEFT WHITE TORTOISE SHELL BRACKET
27ED ; 27EC # MATHEMATICAL RIGHT WHITE TORTOISE SHELL BRACKET
27EE ; 27EF # MATHEMATICAL LEFT FLATTENED PARENTHESIS
27EF ; 27EE # MATHEMATICAL RIGHT FLATTENED PARENTHESIS
2983 ; 2984 # LEFT WHITE CURLY BRACKET
2984 ; 2983 # RIGHT WHITE CURLY BRACKET
2985 ; 2986 # LEFT WHITE PARENTHESIS
2986 ; 2985 # RIGHT WHITE PARENTHESIS
2987 ; 2988 # Z NOTATION LEFT IMAGE BRACKET
2988 ; 2987 # Z NOTATION RIGHT IMAGE BRACKET
2989 ; 298A # Z NOTATION LEFT BINDING BRACKET
298A ; 2989 # Z NOTATION RIGHT BINDING BRACKET
298B ; 298C # LEFT SQUARE BRACKET WITH UNDERFILL
298C ; 298B # RIGHT SQUARE BRACKET WITH UNDERFILL
298D ; 2990 # LEFT SQUARE BRACKET WITH TICK IN TOP CORNER
2990 ; 298D # RIGHT SQUARE BRACKET WITH TICK IN TOP CORNER
2991 ; 2992 # LEFT SQUARE BRACKET WITH TICK IN BOTTOM CORNER
2992 ; 2991 # RIGHT SQUARE BRACKET WITH TICK IN BOTTOM CORNER
2993 ; 2994 # LEFT ANGLE BRACKET WITH DOT
2994 ; 2993 # RIGHT ANGLE BRACKET WITH DOT
2995 ; 2996 # LEFT ARC LESS-THAN BRACKET
2996 ; 2995 # RIGHT ARC GREATER-THAN BRACKET
2997 ; 2998 # LEFT BLACK TORTOISE SHELL BRACKET
2998 ; 2997 # RIGHT BLACK TORTOISE SHELL BRACKET
29D8 ; 29D9 # LEFT WIGGLY FENCE
29D9 ; 29D8 # RIGHT WIGGLY FENCE
29DB ; 29DC # LEFT DOUBLE WIGGLY FENCE
29DC ; 29DB # RIGHT DOUBLE WIGGLY FENCE
29FC ; 29FD # LEFT-POINTING CURVED ANGLE BRACKET
29FD ; 29FC # RIGHT-POINTING CURVED ANGLE BRACKET
2A2B ; 2A2C # MINUS SIGN WITH FALLING DOTS
2A2C ; 2A2B # MINUS SIGN WITH RISING DOTS
2A2D ; 2A2D # PLUS SIGN IN LEFT HALF CIRCLE
2A2E ; 2A2E # PLUS SIGN IN RIGHT HALF CIRCLE
2A34 ; 2A35 # MULTIPLICATION SIGN IN LEFT HALF CIRCLE
2A35 ; 2A34 # MULTIPLICATION SIGN IN RIGHT HALF CIRCLE
2A3C ; 2A3C # INTERIOR PRODUCT
2A3D ; 2A3D # RIGHTHAND INTERIOR PRODUCT
2A3E ; 2A3E # Z NOTATION RELATIONAL COMPOSITION
2A64 ; 2A65 # Z NOTATION DOMAIN ANTIRESTRICTION
2A65 ; 2A64 # Z NOTATION RANGE ANTIRESTRICTION
2A79 ; 2A7A # LESS-THAN WITH CIRCLE INSIDE
2A7A ; 2A79 # GREATER-THAN WITH CIRCLE INSIDE
2A7D ; 2A7E # LESS-THAN OR SLANTED EQUAL TO
2A7E ; 2A7D # GREATER-THAN OR SLANTED EQUAL TO
2A80 ; 2A81 # DOT SMALLER-THAN
2A81 ; 2A80 # DOT LARGER-THAN
2A82 ; 2A83 # PLUS SIGN WITH DOT BELOW
2A83 ; 2A82 # PLUS SIGN WITH DOT ABOVE
2A84 ; 2A85 # PLUS SIGN WITH TILDE BELOW
2A85 ; 2A84 # PLUS SIGN WITH TILDE ABOVE
2A8B ; 2A8C # LESS-THAN ABOVE DOUBLE-LINE EQUAL ABOVE GREATER-THAN
2A8C ; 2A8B # GREATER-THAN ABOVE DOUBLE-LINE EQUAL ABOVE LESS-THAN
2A8D ; 2A8E # LESS-THAN ABOVE SIMILAR OR EQUAL
2A8E ; 2A8D # GREATER-THAN ABOVE SIMILAR OR EQUAL
2A8F ; 2A90 # LESS-THAN ABOVE GREATER-THAN ABOVE
2A90 ; 2A8F # GREATER-THAN ABOVE LESS-THAN ABOVE
2A91 ; 2A92 # LESS-THAN ABOVE GREATER-THAN BELOW
2A92 ; 2A91 # GREATER-THAN ABOVE LESS-THAN BELOW
2A93 ; 2A94 # LESS-THAN ABOVE SUBSET
2A94 ; 2A93 # GREATER-THAN ABOVE SUPERSET
2A95 ; 2A96 # LESS-THAN ABOVE SUBMAP
2A96 ; 2A95 # GREATER-THAN ABOVE SUPERMAP
2A97 ; 2A98 # LESS-THAN ABOVE HUMP
2A98 ; 2A97 # GREATER-THAN ABOVE HUMP
2A99 ; 2A9A # LESS-THAN ABOVE EQUAL TO
2A9A ; 2A99 # GREATER-THAN ABOVE EQUAL TO
2A9B ; 2A9C # LESS-THAN ABOVE EQUAL TO ABOVE GREATER-THAN
2A9C ; 2A9B # GREATER-THAN ABOVE EQUAL TO ABOVE LESS-THAN
2A9D ; 2A9E # LESS-THAN ABOVE SIMILAR ABOVE GREATER-THAN
2A9E ; 2A9D # GREATER-THAN ABOVE SIMILAR ABOVE LESS-THAN
2AA1 ; 2AA2 # DOUBLE NESTED LESS-THAN
2AA2 ; 2AA1 # DOUBLE NESTED GREATER-THAN
2AA6 ; 2AA7 # LESS-THAN CLOSED BY GREATER-THAN
2AA7 ; 2AA6 # GREATER-THAN CLOSED BY LESS-THAN
2AA8 ; 2AA9 # LESS-THAN BEYOND GREATER-THAN
2AA9 ; 2AA8 # GREATER-THAN BEYOND LESS-THAN
2AAA ; 2AAB # PRECEDES ABOVE SINGLE-LINE EQUAL
2AAB ; 2AAA # SUCCEEDS ABOVE SINGLE-LINE EQUAL
2AAC ; 2AAD # LESS-THAN ABOVE EQUAL TO
2AAD ; 2AAC # GREATER-THAN ABOVE EQUAL TO
2AAF ; 2AB0 # PRECEDES ABOVE EQUAL TO
2AB0 ; 2AAF # SUCCEEDS ABOVE EQUAL TO
2AB3 ; 2AB4 # PRECEDES ABOVE NOT EQUAL TO
2AB4 ; 2AB3 # SUCCEEDS ABOVE NOT EQUAL TO
2ABB ; 2ABC # DOUBLE PRECEDES
2ABC ; 2ABB # DOUBLE SUCCEEDS
2ABD ; 2ABE # SUBSET WITH DOT
2ABE ; 2ABD # SUPERSET WITH DOT
2ABF ; 2AC0 # SUBSET WITH PLUS SIGN BELOW
2AC0 ; 2ABF # SUPERSET WITH PLUS SIGN BELOW
2AC1 ; 2AC2 # SUBSET WITH MULTIPLICATION SIGN BELOW
2AC2 ; 2AC1 # SUPERSET WITH MULTIPLICATION SIGN BELOW
2AC3 ; 2AC4 # SUBSET OF OR EQUAL TO WITH DOT ABOVE
2AC4 ; 2AC3 # SUPERSET OF OR EQUAL TO WITH DOT ABOVE
2AC5 ; 2AC6 # SUBSET OF ABOVE EQUAL TO
2AC6 ; 2AC5 # SUPERSET OF ABOVE EQUAL TO
2AC7 ; 2AC8 # SUBSET OF ABOVE TILDE OPERATOR
2AC8 ; 2AC7 # SUPERSET OF ABOVE TILDE OPERATOR
2AC9 ; 2ACA # SUBSET OF ABOVE ALMOST EQUAL TO
2ACA ; 2AC9 # SUPERSET OF ABOVE ALMOST EQUAL TO
2ACB ; 2ACC # SUBSET OF ABOVE NOT EQUAL TO
2ACC ; 2ACB # SUPERSET OF ABOVE NOT EQUAL TO
2ACD ; 2ACE # SQUARE LEFT OPEN BOX OPERATOR
2ACE ; 2ACD # SQUARE RIGHT OPEN BOX OPERATOR
2ACF ; 2AD0 # CLOSED SUBSET
2AD0 ; 2ACF # CLOSED SUPERSET
2AD1 ; 2AD2 # CLOSED SUBSET OR EQUAL TO
2AD2 ; 2AD1 # CLOSED SUPERSET OR EQUAL TO
2AD3 ; 2AD4 # SUBSET OR EQUAL TO WITH DOT ABOVE
2AD4 ; 2AD3 # SUPERSET OR EQUAL TO WITH DOT ABOVE
2AD5 ; 2AD6 # SUBSET OR EQUAL TO WITH DOT BELOW
2AD6 ; 2AD5 # SUPERSET OR EQUAL TO WITH DOT BELOW
2AD7 ; 2AD8 # SUBSET OF ABOVE EQUAL TO
2AD8 ; 2AD7 # SUPERSET OF ABOVE EQUAL TO
2ADE ; 22A6 # ASSERTION
2AE3 ; 22A9 # DOUBLE PRECEDES
2AE4 ; 22A8 # TRUE
2AE5 ; 22AB # DOUBLE STROKE
2AEC ; 2AED # DOUBLE STRUCK NOT SIGN
2AED ; 2AEC # REVERSED DOUBLE STRUCK NOT SIGN
2AF7 ; 2AF8 # TRIPLE NESTED LESS-THAN
2AF8 ; 2AF7 # TRIPLE NESTED GREATER-THAN
2AF9 ; 2AFA # DOUBLE-LINE SLANTED LESS-THAN OR EQUAL TO
2AFA ; 2AF9 # DOUBLE-LINE SLANTED GREATER-THAN OR EQUAL TO
2B7D ; 2B7C # LEFTWARDS ARROW WITH VERTICAL STROKE
2B7C ; 2B7D # RIGHTWARDS ARROW WITH VERTICAL STROKE
2B80 ; 2B81 # LEFTWARDS ARROW WITH DOUBLE VERTICAL STROKE
2B81 ; 2B80 # RIGHTWARDS ARROW WITH DOUBLE VERTICAL STROKE
2B82 ; 2B83 # LEFTWARDS ARROW WITH TWO HEADS
2B83 ; 2B82 # RIGHTWARDS ARROW WITH TWO HEADS
2B84 ; 2B85 # LEFTWARDS ARROW FROM BAR
2B85 ; 2B84 # RIGHTWARDS ARROW FROM BAR
2B86 ; 2B87 # LEFTWARDS ARROW WITH TAIL
2B87 ; 2B86 # RIGHTWARDS ARROW WITH TAIL
2B88 ; 2B89 # LEFTWARDS ARROW THROUGH X
2B89 ; 2B88 # RIGHTWARDS ARROW THROUGH X
2B8A ; 2B8B # LEFTWARDS TRIPLE ARROW
2B8B ; 2B8A # RIGHTWARDS TRIPLE ARROW
2B8C ; 2B8D # LEFTWARDS ARROW TO BLACK DIAMOND
2B8D ; 2B8C # RIGHTWARDS ARROW TO BLACK DIAMOND
2B8E ; 2B8F # LEFTWARDS ARROW FROM BAR TO BLACK DIAMOND
2B8F ; 2B8E # RIGHTWARDS ARROW FROM BAR TO BLACK DIAMOND
2B90 ; 2B91 # LEFTWARDS DOUBLE ARROW WITH VERTICAL STROKE
2B91 ; 2B90 # RIGHTWARDS DOUBLE ARROW WITH VERTICAL STROKE
2B92 ; 2B93 # LEFTWARDS DOUBLE ARROW WITH TWO HEADS
2B93 ; 2B92 # RIGHTWARDS DOUBLE ARROW WITH TWO HEADS
2B94 ; 2B95 # LEFTWARDS DOUBLE ARROW FROM BAR
2B95 ; 2B94 # RIGHTWARDS DOUBLE ARROW FROM BAR
2B96 ; 2B97 # LEFTWARDS DOUBLE ARROW WITH TAIL
2B97 ; 2B96 # RIGHTWARDS DOUBLE ARROW WITH TAIL
2B98 ; 2B99 # LEFTWARDS DOUBLE ARROW THROUGH X
2B99 ; 2B98 # RIGHTWARDS DOUBLE ARROW THROUGH X
2B9A ; 2B9B # LEFTWARDS TRIPLE DOUBLE ARROW
2B9B ; 2B9A # RIGHTWARDS TRIPLE DOUBLE ARROW
2B9C ; 2B9D # LEFTWARDS ARROW TO BLACK DIAMOND
2B9D ; 2B9C # RIGHTWARDS ARROW TO BLACK DIAMOND
2B9E ; 2B9F # LEFTWARDS ARROW FROM BAR TO BLACK DIAMOND
2B9F ; 2B9E # RIGHTWARDS ARROW FROM BAR TO BLACK DIAMOND
2BA0 ; 2BA1 # LEFTWARDS DOUBLE ARROW WITH VERTICAL STROKE
2BA1 ; 2BA0 # RIGHTWARDS DOUBLE ARROW WITH VERTICAL STROKE
2BA2 ; 2BA3 # LEFTWARDS DOUBLE ARROW WITH TWO HEADS
2BA3 ; 2BA2 # RIGHTWARDS DOUBLE ARROW WITH TWO HEADS
2BA4 ; 2BA5 # LEFTWARDS DOUBLE ARROW FROM BAR
2BA5 ; 2BA4 # RIGHTWARDS DOUBLE ARROW FROM BAR
2BA6 ; 2BA7 # LEFTWARDS DOUBLE ARROW WITH TAIL
2BA7 ; 2BA6 # RIGHTWARDS DOUBLE ARROW WITH TAIL
2BA8 ; 2BA9 # LEFTWARDS DOUBLE ARROW THROUGH X
2BA9 ; 2BA8 # RIGHTWARDS DOUBLE ARROW THROUGH X
2BAA ; 2BAB # LEFTWARDS TRIPLE DOUBLE ARROW
2BAB ; 2BAA # RIGHTWARDS TRIPLE DOUBLE ARROW
2BAC ; 2BAD # LEFTWARDS ARROW TO BLACK DIAMOND
2BAD ; 2BAC # RIGHTWARDS ARROW TO BLACK DIAMOND
2BAE ; 2BAF # LEFTWARDS ARROW FROM BAR TO BLACK DIAMOND
2BAF ; 2BAE # RIGHTWARDS ARROW FROM BAR TO BLACK DIAMOND
2BC0 ; 2BC1 # SQUARE WITH NW-SE DIAGONAL CROSSING
2BC1 ; 2BC0 # SQUARE WITH NE-SW DIAGONAL CROSSING
2BD1 ; 2BD2 # UNCERTAINTY SIGN
2BD2 ; 2BD1 # GROUP MARK
2BE4 ; 2BE5 # ARC
2BE5 ; 2BE4 # ARC
2BE6 ; 2BE7 # SQUARED RISING DIAGONAL SLASH
2BE7 ; 2BE6 # SQUARED FALLING DIAGONAL SLASH
2BE8 ; 2BE9 # SQUARED ASCENDING VERTICAL
2BE9 ; 2BE8 # SQUARED DESCENDING VERTICAL
2BEA ; 2BEB # SQUARED ASCENDING INTERSECTING DIAGONAL
2BEB ; 2BEA # SQUARED DESCENDING INTERSECTING DIAGONAL
2BF0 ; 2BF1 # TURNED DIVISION SIGN
2BF1 ; 2BF0 # TURNED PLUS
2C9C ; 2C9D # LATIN SMALL LETTER V WITH CURL
2C9D ; 2C9C # LATIN CAPITAL LETTER V WITH CURL
2C9E ; 2C9F # LATIN SMALL LETTER W WITH CURL
2C9F ; 2C9E # LATIN CAPITAL LETTER W WITH CURL
2CA0 ; 2CA1 # LATIN SMALL LETTER X WITH CURL
2CA1 ; 2CA0 # LATIN CAPITAL LETTER X WITH CURL
2CA2 ; 2CA3 # LATIN SMALL LETTER Y WITH CURL
2CA3 ; 2CA2 # LATIN CAPITAL LETTER Y WITH CURL
2CA4 ; 2CA5 # LATIN SMALL LETTER Z WITH CURL
2CA5 ; 2CA4 # LATIN CAPITAL LETTER Z WITH CURL
2CF9 ; 2CFA # COPTIC OPENING GOLEUB
2CFA ; 2CF9 # COPTIC CLOSING GOLEUB
2D70 ; 2D71 # TIFINAGH SEPARATOR MARK
2D71 ; 2D70 # TIFINAGH CONSONANT JOINER
2E02 ; 2E03 # LEFT SUBSTITUTION BRACKET
2E03 ; 2E02 # RIGHT SUBSTITUTION BRACKET
2E04 ; 2E05 # LEFT DOTTED SUBSTITUTION BRACKET
2E05 ; 2E04 # RIGHT DOTTED SUBSTITUTION BRACKET
2E09 ; 2E0A # LEFT TRANSPOSITION BRACKET
2E0A ; 2E09 # RIGHT TRANSPOSITION BRACKET
2E0C ; 2E0D # LEFT RAISED OMISSION BRACKET
2E0D ; 2E0C # RIGHT RAISED OMISSION BRACKET
2E1C ; 2E1D # LEFT LOW PARAPHRASE BRACKET
2E1D ; 2E1C # RIGHT LOW PARAPHRASE BRACKET
2E20 ; 2E21 # LEFT VERTICAL BAR WITH QUILL
2E21 ; 2E20 # RIGHT VERTICAL BAR WITH QUILL
2E22 ; 2E23 # TOP LEFT HALF BRACKET
2E23 ; 2E22 # TOP RIGHT HALF BRACKET
2E24 ; 2E25 # BOTTOM LEFT HALF BRACKET
2E25 ; 2E24 # BOTTOM RIGHT HALF BRACKET
2E26 ; 2E27 # LEFT SIDEWAYS U BRACKET
2E27 ; 2E26 # RIGHT SIDEWAYS U BRACKET
2E28 ; 2E29 # LEFT DOUBLE PARENTHESIS
2E29 ; 2E28 # RIGHT DOUBLE PARENTHESIS
2E55 ; 2E56 # LEFT SQUARE BRACKET WITH STRIKETHROUGH
2E56 ; 2E55 # RIGHT SQUARE BRACKET WITH STRIKETHROUGH
2E57 ; 2E58 # LEFT SQUARE BRACKET WITH DOUBLE STRIKETHROUGH
2E58 ; 2E57 # RIGHT SQUARE BRACKET WITH DOUBLE STRIKETHROUGH
2E59 ; 2E5A # TOP HALF SECTION
2E5A ; 2E59 # BOTTOM HALF SECTION
2E5B ; 2E5C # LEFT BLACK TORTOISE SHELL BRACKET
2E5C ; 2E5B # RIGHT BLACK TORTOISE SHELL BRACKET
3008 ; 3009 # LEFT ANGLE BRACKET
3009 ; 3008 # RIGHT ANGLE BRACKET
300A ; 300B # LEFT DOUBLE ANGLE BRACKET
300B ; 300A # RIGHT DOUBLE ANGLE BRACKET
300C ; 300D # LEFT CORNER BRACKET
300D ; 300C # RIGHT CORNER BRACKET
300E ; 300F # LEFT WHITE CORNER BRACKET
300F ; 300E # RIGHT WHITE CORNER BRACKET
3010 ; 3011 # LEFT BLACK LENTICULAR BRACKET
3011 ; 3010 # RIGHT BLACK LENTICULAR BRACKET
3014 ; 3015 # LEFT TORTOISE SHELL BRACKET
3015 ; 3014 # RIGHT TORTOISE SHELL BRACKET
3016 ; 3017 # LEFT WHITE LENTICULAR BRACKET
3017 ; 3016 # R
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     3 '3 UNDER 16 INAPPLICABLE' /
STNDIF13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 NO DIFFICULTY'
     2 '2 SOME DIFFICULTY'
     3 '3 A LOT OF DIFFICULTY'
     4 '4 UNABLE TO DO' /
STPDIF13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 NO DIFFICULTY'
     2 '2 SOME DIFFICULTY'
     3 '3 A LOT OF DIFFICULTY'
     4 '4 COMPLETELY UNABLE TO DO IT'
     5 '5 COMPLETELY UNABLE TO WALK' /
STPRG13
     -1 '-1 INAPPLICABLE'
     1 '1 YES'
     2 '2 NO' /
TRINW13X
     -1 '-1 INAPPLICABLE'
     1 '1 YES'
     2 '2 NO' /
UNABLE13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 YES'
     2 '2 NO' /
WGTRU13
     -1 '-1 INAPPLICABLE'
     0 '0.000000 WEIGHT' /
WGTSP13
     -1 '-1 INAPPLICABLE'
     0 '0.000000 WEIGHT' /
WLKDIF13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 NO DIFFICULTY'
     2 '2 SOME DIFFICULTY'
     3 '3 A LOT OF DIFFICULTY'
     4 '4 UNABLE TO DO' /
WLKLIM13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 YES'
     2 '2 NO' /
WRKLIM13
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 YES'
     2 '2 NO' /
YRSINUS
     -1 '-1 INAPPLICABLE'
     -7 '-7 REFUSED'
     -8 '-8 DK'
     -9 '-9 NOT ASCERTAINED'
     1 '1 LESS THAN 1 YEAR'
     2 '2 1 YR., LESS THAN 5 YRS.'
     3 '3 5 YRS., LESS THAN 10 YRS.'
     4 '4 10 YRS., LESS THAN 15 YRS.'
     5 '5 15 YEARS OR MORE' .
EXECUTE.
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